10/25/2005
Bank: (Aviation Mechanic General)
Airman Knowledge Test Question Bank

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1. A01G AMG

In an ac circuit, the effective voltage is

A) equal to the maximum instantaneous voltage.

B) greater than the maximum instantaneous voltage.

C) less than the maximum instantaneous voltage.

2. A01G AMG

The basis for transformer operation in the use of alternating current is mutual

A) inductance.

B) capacitance.

C) reactance.

3. A01G AMG

(Refer to General figure 2.) What is the total capacitance of a circuit containing three capacitors in parallel with capacitances of .02 microfarad, .05 microfarad, and .10 microfarad, respectively?

A) .170 µ F.

B) 0.125 pF.

C) .0125 µ F.

4. A01G AMG

When inductors are connected in series in a circuit, the total inductance is (where the magnetic fields of each inductor do not affect the others)

(Note: LT = L1 + L2 + L3 . . .)

A) less than the inductance of the lowest rated inductor.

B) equal to the inductance of the highest rated inductor.

C) equal to the sum of the individual inductances.

5. A01G AMG

The amount of electricity a capacitor can store is directly proportional to the

A) distance between the plates and inversely proportional to the plate area.

B) plate area and is not affected by the distance between the plates.

C) plate area and inversely proportional to the distance between the plates.

6. A01G AMG

The opposition offered by a coil to the flow of alternating current is called (disregard resistance)

A) impedance.

B) reluctance.

C) inductive reactance.

7. A02G AMG

How many amperes will a 28-volt generator be required to supply to a circuit containing five lamps in parallel, three of which have a resistance of 6 ohms each and two of which have a resistance of 5 ohms each?

A) 1.11 amperes.

B) 1 ampere.

C) 25.23 amperes.

8. A02G AMG

The potential difference between two conductors which are insulated from each other is measured in

A) volts.

B) amperes.

C) coulombs.

9. A02G AMG

Which requires the most electrical power during operation?

(Note: 1 horsepower = 746 watts)

A) A 12-volt motor requiring 8 amperes.

B) Four 30-watt lamps in a 12-volt parallel circuit.

C) Two lights requiring 3 amperes each in a 24-volt parallel system.

10. A02G AMG

A 24-volt source is required to furnish 48 watts to a parallel circuit consisting of four resistors of equal value. What is the voltage drop across each resistor?

A) 12 volts.

B) 6 volts.

C) 24 volts.

11. A04G AMG

Which is correct concerning a parallel circuit?

A) Total resistance will be smaller than the smallest resistor.

B) Total resistance will decrease when one of the resistances is removed.

C) Total voltage drop is the same as the total resistance.

12. A04G AMG

Transfer of electric energy from one circuit to another without the aid of electrical connections

A) is called induction.

B) is called capacitance.

C) can cause excessive arcing and heat, and as a result is practical for use only with low voltages/amperages.

13. A04G AMG

Through which material will magnetic lines of force pass the most readily?

A) Copper.

B) Iron.

C) Aluminum.

14. A04G AMG

(Refer to General figure 11.) Find the total current flowing in the wire between points C and D.

A) 6.0 amperes.

B) 2.4 amperes.

C) 3.0 amperes.

15. A04G AMG

(Refer to General figure 13.) Determine the total current flow in the circuit.

A) 0.2 ampere.

B) 1.4 amperes.

C) 0.8 ampere.

16. A04G AMG

What unit is used to express electrical power?

A) Volt.

B) Watt.

C) Ampere.

17. A04G AMG

What is the operating resistance of a 30-watt light bulb designed for a 28-volt system?

A) 1.07 ohms.

B) 26 ohms.

C) 0.93 ohm.

18. A04G AMG

Which is correct in reference to electrical resistance?

A) Two electrical devices will have the same combined resistance if they are connected in series as they will have if connected in parallel.

B) If one of three bulbs in a parallel lighting circuit is removed, the total resistance of the circuit will become greater.

C) An electrical device that has a high resistance will use more power than one with a low resistance with the same applied voltage.

19. A04G AMG

A 48-volt source is required to furnish 192 watts to a parallel circuit consisting of three resistors of equal value. What is the value of each resistor?

A) 36 ohms.

B) 4 ohms.

C) 12 ohms.

20. A04G AMG

The voltage drop in a circuit of known resistance is dependent on

A) the voltage of the circuit.

B) only the resistance of the conductor, and does not change with a change in either voltage or amperage.

C) the amperage of the circuit.

21. A04G AMG

(Refer to General figure 11.) Find the voltage across the 8-ohm resistor.

A) 8 volts.

B) 20.4 volts.

C) 24 volts.

22. A06G AMG

A fully charged lead acid battery will not freeze until extremely low temperatures are reached because

A) the acid is in the plates, thereby increasing the specific gravity of the solution.

B) most of the acid is in the solution.

C) increased internal resistance generates sufficient heat to prevent freezing.

23. A06G AMG

The electrolyte of a nickel cadmium battery is highest when the battery is

A) in a fully charged condition.

B) in a discharged condition.

C) under a no-load condition.

24. A06G AMG

The purpose of providing a space underneath the plates in a lead acid battery's cell container is to

A) allow for convection flow of the electrolyte in order to provide for cooling of the plates.

B) prevent sediment buildup from contacting the plates and causing a short circuit.

C) ensure that the electrolyte quantity ratio to the number of plates and plate area is adequate.

25. A06G AMG

In nickel cadmium batteries, a rise in cell temperature

A) causes an increase in internal resistance.

B) causes a decrease in internal resistance.

C) increases cell voltage.

26. A06G AMG

If electrolyte from a lead-acid battery is spilled in the battery compartment, which procedure should be followed?

A) Apply boric acid solution to the affected area followed by a water rinse.

B) Rinse the affected area thoroughly with clean water.

C) Apply sodium bicarbonate solution to the affected area followed by a water rinse.

27. A06G AMG

Which of the following statements is/are generally true regarding the charging of several aircraft batteries together?

1. Batteries of different voltages (but similar capacities) can be connected in series with each other across the charger, and charged using the constant current method.

2. Batteries of different ampere-hour capacity and same voltage can be connected in parallel with each other across the charger, and charged using the constant voltage method.

3. Batteries of the same voltage and same ampere-hour capacity must be connected in series with each other across the charger, and charged using the constant current method.

A) 3.

B) 2 and 3.

C) 1 and 2.

28. A06G AMG

The end of charge voltage of a 19 cell nickel cadmium battery, measured while still on charge,

A) must be 1.2 to 1.3 volts per cell.

B) must be 1.4 volts per cell.

C) depends upon its temperature and the method used for charging.

29. A06G AMG

Which condition is an indication of improperly torqued cell link connections of a nickel cadmium battery?

A) Light spewing at the cell caps.

B) Toxic and corrosive deposits of potassium carbonate crystals.

C) Heat or burn marks on the hardware.

30. A03G AMG

(Refer to General figure 8.) With an ohmmeter connected into the circuit as shown, what will the ohmmeter read?

A) 20 ohms.

B) Infinite resistance.

C) 10 ohms.

31. A03G AMG

The correct way to connect a test voltmeter in a circuit is

A) in series with a unit.

B) between the source voltage and the load.

C) in parallel with a unit.

32. A03G AMG

(Refer to General figure 6.) If resistor R5 is disconnected at the junction of R4 and R3 as shown, what will the ohmmeter read?

A) 2.76 ohms.

B) 3 ohms.

C) 12 ohms.

33. A03G AMG

A cabin entry light of 10 watts and a dome light of 20 watts are connected in parallel to a 30-volt source. If the voltage across the 10-watt light is measured, it will be

A) equal to the voltage across the 20-watt light.

B) half the voltage across the 20-watt light.

C) one-third of the input voltage.

34. A03G AMG

.002KV equals

A) 20 volts.

B) 2.0 volts.

C) .2 volt.

35. A05G AMG

(Refer to General figure 26.) Which of the logic gate output conditions is correct with respect to the given inputs?

A) 1.

B) 2.

C) 3.

36. A05G AMG

(Refer to General figure 24.) Which statement concerning the depicted logic gate is true?

A) Any input being 1 will produce a 0 output.

B) Any input being 1 will produce a 1 output.

C) All inputs must be 1 to produce a 1 output.

37. A05G AMG

Forward biasing of a solid state device will cause the device to

A) conduct via zener breakdown.

B) conduct.

C) turn off.

38. A05G AMG

In an N-P-N transistor application, the solid state device is turned on when the

A) emitter is positive with respect to the base.

B) base is negative with respect to the emitter.

C) base is positive with respect to the emitter.

39. A05G AMG

(Refer to General figure 17.) The electrical symbol represented at number 5 is a variable

A) inductor.

B) resistor.

C) capacitor.

40. A05G AMG

(Refer to General figure 21.) Which symbol represents a variable resistor?

A) 2.

B) 1.

C) 3.

41. A05G AMG

(Refer to General figure 15.) The No. 7 wire is used to

A) close the PUSH TO TEST circuit.

B) open the UP indicator light circuit when the landing gear is retracted.

C) close the UP indicator light circuit when the landing gear is retracted.

42. A05G AMG

A thermal switch or thermal protector, as used in an electric motor, is designed to

A) close the integral fan circuit to allow cooling of the motor.

B) open the circuit in order to allow cooling of the motor.

C) reroute the circuit to ground.

43. A05G AMG

(Refer to General figure 16.) With power to the bus and the fuel selector switched to the right hand tank, how many relays in the system are operating?

A) Three.

B) Two.

C) Four.

44. A05G AMG

(Refer to General figure 18.) The control valve switch must be placed in the neutral position when the landing gears are down to

A) permit the test circuit to operate.

B) prevent the warning horn from sounding when the throttles are closed.

C) remove the ground from the green light.

45. A05G AMG

(Refer to General figure 19.) When the throttles are retarded with only the right gear down, the warning horn will not sound if an open occurs in wire

A) No. 5.

B) No. 13.

C) No. 6.

46. A05G AMG

(Refer to General figure 20.) Troubleshooting an open circuit with a voltmeter as shown in this circuit will

A) permit current to flow and illuminate the lamp.

B) create a low resistance path and the current flow will be greater than normal.

C) permit the battery voltage to appear on the voltmeter.

47. A05G AMG

(Refer to General figure 16.) What will be the effect if the PCO relay fails to operate when the

left hand tank is selected?

A) The fuel pressure crossfeed valve will not open.

B) The fuel tank crossfeed valve open light will illuminate.

C) The fuel pressure crossfeed valve open light will not illuminate.

48. A05G AMG

(Refer to General figure 23.) If an open occurs at R1, the light

A) cannot be turned on.

B) will not be affected.

C) cannot be turned off.

49. B02G AMG

For sketching purposes, almost all objects are composed of one or some combination of six basic shapes; these include the

A) angle, arc, line, plane, square, and circle.

B) triangle, circle, cube, cylinder, cone, and sphere.

C) triangle, plane, circle, line, square, and sphere.

50. B02G AMG

(1) According to 14 CFR Part 91, repairs to an aircraft skin should have a detailed dimensional sketch included in the permanent records.

(2) On occasion, a mechanic may need to make a simple sketch of a proposed repair to an aircraft, a new design, or a modification.

Regarding the above statements,

A) only No. 1 is true.

B) only No. 2 is true.

C) both No. 1 and No. 2 are true.

51. B02G AMG

(Refer to General figure 31.) What are the proper procedural steps for sketching repairs and alterations?

A) 3, 1, 4, 2.

B) 4, 2, 3, 1.

C) 1, 3, 4, 2.

52. B02G AMG

What should be the first step of the procedure in sketching an aircraft wing skin repair?

A) Draw heavy guidelines.

B) Lay out the repair.

C) Block in the views.

53. B02G AMG

What is the class of working drawing that is the description/depiction of a single part?

A) Installation drawing.

B) Assembly drawing

C) Detail drawing.

54. B03G AMG

(Refer to General figure 34.) What would be the minimum diameter of 4130 round stock required for the construction of the clevis that would produce a machined surface?

A) 55/64 inch.

B) 1 inch.

C) 7/8 inch.

55. B03G AMG

In the reading of aircraft blueprints, the term 'tolerance', used in association with aircraft parts or components,

A) is the tightest permissible fit for proper construction and operation of mating parts.

B) is the difference between extreme permissible dimensions that a part may have and still be acceptable.

C) represents the limit of galvanic compatibility between different adjoining material types in aircraft parts.

56. B03G AMG

(1) A measurement should not be scaled from an aircraft print because the paper shrinks or stretches when the print is made.

(2) When a detail drawing is made, it is carefully and accurately drawn to scale, and is dimensioned.

Regarding the above statements,

A) only No. 2 is true.

B) both No. 1 and No. 2 are true.

C) neither No. 1 nor No. 2 is true.

57. B03G AMG

A drawing in which the subassemblies or parts are shown as brought together on the aircraft is called

A) an assembly drawing.

B) an installation drawing.

C) a detail drawing.

58. B03G AMG

In what type of electrical diagram are images of components used instead of conventional electrical symbols?

A) A pictorial diagram.

B) A schematic diagram.

C) A block diagram.

59. B01G AMG

(Refer to General figure 27.) In the isometric view of a typical aileron balance weight, identify the view indicated by the arrow.

A) 1.

B) 3.

C) 2.

60. B01G AMG

Which statement is true regarding an orthographic projection?

A) There are always at least two views.

B) It could have as many as eight views.

C) One view, two view, and three view drawings are the most common.

61. B01G AMG

Which of the following terms is/are used to indicate specific measured distances from the datum and/or other points identified by the manufacturer, to points in or on the aircraft?

1. Zone numbers.

2. Reference numbers.

3. Station numbers.

A) 1 and 3.

B) 3.

C) 2

62. B01G AMG

(1) Schematic diagrams indicate the location of individual components in the aircraft.

(2) Schematic diagrams indicate the location of components with respect to each other within the system.

Regarding the above statements,

A) only No. 1 is true.

B) both No. 1 and No. 2 are true.

C) only No. 2 is true.

63. B04G AMG

(Refer to General figure 40.) Determine the proper tension for a 3/16-inch cable (7 x 19 extra flex) if the temperature is 87 °F.

A) 135 pounds.

B) 125 pounds.

C) 140 pounds.

64. B04G AMG

(Refer to General figure 39.) Determine the minimum wire size of a single cable in a bundle carrying a continuous current of 20 amperes 10 feet from the bus to the equipment in a 28-volt system with an allowable 1-volt drop.

A) No. 12.

B) No. 14.

C) No. 16.

65. C02G AMG

When computing the maximum forward loaded CG of an aircraft, minimum weights, arms, and moments should be used for items of useful load that are located aft of the

A) rearward CG limit.

B) forward CG limit.

C) datum.

66. C02G AMG

An aircraft as loaded weighs 4,954 pounds at a CG of +30.5 inches. The CG range is +32.0 inches to +42.1 inches. Find the minimum weight of the ballast necessary to bring the CG within the CG range. The ballast arm is +162 inches.

A) 61.98 pounds.

B) 30.58 pounds.

C) 57.16 pounds.

67. C02G AMG

Two boxes which weigh 10 pounds and 5 pounds are placed in an airplane so that their distance aft from the CG are 4 feet and 2 feet respectively. How far forward of the CG should a third box, weighing 20 pounds, be placed so that the CG will not be changed?

A) 3 feet.

B) 2.5 feet.

C) 8 feet.

68. C02G AMG

If the empty weight CG of an airplane lies within the empty weight CG limits,

A) it is necessary to calculate CG extremes.

B) it is not necessary to calculate CG extremes.

C) minimum fuel should be used in both forward and rearward CG checks.

69. C02G AMG

When determining the empty weight of an aircraft, certificated under current airworthiness standards (14 CFR Part 23), the oil contained in the supply tank is considered

A) a part of the empty weight.

B) a part of the useful load.

C) the same as the fluid contained in the water injection reservoir.

70. C02G AMG

The CG range in single rotor helicopters is

A) much greater than for airplanes.

B) approximately the same as the CG range for airplanes.

C) more restricted than for airplanes.

71. C02G AMG

The maximum weight as used in weight and balance control of a given aircraft can normally be found

A) by adding the weight of full fuel, pilot, passengers, and maximum allowable baggage to the empty weight.

B) in the Aircraft Specification or Type Certificate Data Sheet.

C) by adding the empty weight and payload.

72. C02G AMG

An aircraft's LEMAC and TEMAC are defined in terms of distance

A) from the datum.

B) from each other.

C) ahead of and behind the wing center of lift, respectively.

73. C02G AMG

In a balance computation of an aircraft from which an item located aft of the datum was removed, use

A) (-)weight X (+)arm (-)moment.

B) (-)weight X (-)arm (+)moment.

C) (+)weight X (-)arm (-)moment.

74. C01G AMG

Which statement is true regarding helicopter weight and balance?

A) Regardless of internal or external loading, lateral axis cg control is ordinarily not a factor in maintaining helicopter weight and balance.

B) The moment of tail-mounted components is subject to constant change.

C) Weight and balance procedures for airplanes generally also apply to helicopters.

75. C01G AMG

Use of which of the following generally yields the highest degree of aircraft leveling accuracy?

A) Electronic load cell(s).

B) Spirit level(s).

C) Plumb bob and chalk line.

76. C01G AMG

Zero fuel weight is the

A) dry weight plus the weight of full crew, passengers, and cargo.

B) basic operating weight without crew, fuel, and cargo.

C) maximum permissible weight of a loaded aircraft (passengers, crew, and cargo) without fuel.

77. C01G AMG

What type of measurement is used to designate the arm in weight and balance computation?

A) Distance.

B) Weight.

C) Weight x distance.

78. C01G AMG

The useful load of an aircraft consists of the

A) crew, usable fuel, passengers, and cargo.

B) crew, usable fuel, oil, and fixed equipment.

C) crew, passengers, usable fuel, oil, cargo, and fixed equipment.

79. C01G AMG

What determines whether the value of a moment is preceded by a plus (+) or a minus (-) sign in aircraft weight and balance?

A) The location of the weight in reference to the datum.

B) The result of a weight being added or removed and its location relative to the datum.

C) The location of the datum in reference to the aircraft CG.

80. C01G AMG

What should be clearly indicated on the aircraft weighing form?

A) Minimum allowable gross weight.

B) Weight of unusable fuel.

C) Weighing points.

81. C01G AMG

What tasks are completed prior to weighing an aircraft to determine its empty weight?

A) Remove all items except those on the aircraft equipment list; drain fuel and hydraulic fluid.

B) Remove all items on the aircraft equipment list; drain fuel, compute oil and hydraulic fluid weight.

C) Remove all items except those on the aircraft equipment list; drain fuel and fill hydraulic reservoir.

82. C01G AMG

If it is necessary to weigh an aircraft with full fuel tanks, all fuel weight must be subtracted from the scale reading(s)

A) except minimum fuel.

B) including unusable fuel.

C) except unusable fuel.

83. C01G AMG

Which of the following can provide the empty weight of an aircraft if the aircraft's weight and balance records become lost, destroyed, or otherwise inaccurate?

A) Reweighing the aircraft.

B) The applicable Aircraft Specification or Type Certificate Data Sheet.

C) The applicable flight manual or pilot's operating handbook.

84. C01G AMG

Most modern aircraft are designed so that if all seats are occupied, full baggage weight is carried, and all fuel tanks are full, what will be the weight condition of the aircraft?

A) It will be in excess of maximum takeoff weight.

B) It will be at maximum basic operating weight (BOW).

C) It will be at maximum taxi or ramp weight.

85. D01G AMG

(1) Bonded clamps are used for support when installing metal tubing.

(2) Unbonded clamps are used for support when installing wiring.

Regarding the above statements,

A) only No. 1 is true.

B) both No. 1 and No. 2 are true.

C) neither No. 1 nor No. 2 is true.

86. D01G AMG

From the following sequences of steps, indicate the proper order you would use to make a single flare on a piece of tubing:

1. Place the tube in the proper size hole in the flaring block.

2. Project the end of the tube slightly from the top of the flaring tool, about the thickness of a dime.

3. Slip the fitting nut and sleeve on the tube.

4. Strike the plunger several light blows with a lightweight hammer or mallet and turn the plunger one half turn after each blow.

5. Tighten the clamp bar securely to prevent slippage.

6. Center the plunger or flaring pin over the tube.

A) 1, 3, 5, 2, 4, 6.

B) 3, 1, 6, 2, 5, 4.

C) 3, 1, 2, 6, 5, 4.

87. D01G AMG

The primary purpose of providing suitable bends in fluid and pneumatic metal tubing runs is to

A) clear obstacles and make turns in aircraft structures.

B) provide for access within aircraft structures.

C) prevent excessive stress on the tubing.

88. D01G AMG

Which coupling nut should be selected for use with 1/2-inch aluminum oil lines which are to be assembled using flared tube ends and standard AN nuts, sleeves, and fittings?

A) AN-818-16.

B) AN-818-8.

C) AN-818-5.

89. D01G AMG

In most aircraft hydraulic systems, two piece tube connectors consisting of a sleeve and a nut are used when a tubing flare is required. The use of this type connector eliminates

A) the flaring operation prior to assembly.

B) the possibility of reducing the flare thickness by wiping or ironing during the tightening process.

C) wrench damage to the tubing during the tightening process.

90. D01G AMG

Which of the following statements is/are correct in reference to flare fittings?

1. AN fittings have an identifying shoulder between the end of the threads and the flare cone.

2. AC and AN fittings are considered identical except for material composition and identifying colors.

3. AN fittings are generally interchangeable with AC fittings of compatible material composition

A) 1.

B) 1 and 3.

C) 1, 2, and 3.

91. D01G AMG

Which tubings have the characteristics (high strength, abrasion resistance) necessary for use in a high pressure (3,000 PSI) hydraulic system for operation of landing gear and flaps?

A) 2024-T or 5052-0 aluminum alloy.

B) Corrosion resistant steel annealed or 1/4H.

C) 1100-1/2H or 3003-1/2H aluminum alloy.

92. D01G AMG

Flexible hose used in aircraft systems is classified in size according to the

A) outside diameter.

B) wall thickness.

C) inside diameter.

93. D01G AMG

The material specifications for a certain aircraft require that a replacement oil line be fabricated from 3/4-inch 0.072 5052-0 aluminum alloy tubing. What is the inside dimension of this tubing?

A) 0.606 inch.

B) 0.688 inch.

C) 0.750 inch.

94. D01G AMG

A gas or fluid line marked with the letters PHDAN is

A) a dual-purpose pneumatic and/or hydraulic line for normal and emergency system use.

B) used to carry a hazardous substance.

C) a pneumatic or hydraulic system drain or discharge line.

95. D01G AMG

In a metal tubing installation,

A) rigid straight line runs are preferable.

B) tension is undesirable because pressurization will cause it to expand and shift.

C) a tube may be pulled in line if the nut will start on the threaded coupling.

96. D01G AMG

Flexible lines must be installed with

A) enough slack to allow maximum flexing during operation.

B) a slack of at least 10 to 12 percent of the length.

C) a slack of 5 to 8 percent of the length.

97. D01G AMG

Which statement is true regarding the variety of symbols utilized on the identifying color-code bands that are currently used on aircraft plumbing lines?

A) Symbols are composed of various single colors according to line content.

B) Symbols are always black against a white background regardless of line content.

C) Symbols are composed of one to three contrasting colors according to line content.

98. D01G AMG

The best tool to use when cutting aluminum tubing, or any tubing of moderately soft metal is a

A) hand operated wheel-type tubing cutter.

B) fine-tooth hacksaw.

C) circular-saw equipped with an abrasive cutting wheel.

99. D01G AMG

A scratch or nick in aluminum tubing can be repaired provided it does not

A) appear in the heel of a bend.

B) appear on the inside of a bend.

C) exceed 10 percent of the tube OD on a straight section.

100. D01G AMG

Hydraulic tubing, which is damaged in a localized area to such an extent that repair is necessary, may be repaired

A) by cutting out the damaged area and utilizing a swaged tube fitting to join the tube ends.

B) only by replacing the that tubing section run (connection to connection) using the same size and material as the original.

C) by cutting out the damaged section and soldering in a replacement section of tubing.

101. D01G AMG

The term "cold flow" is generally associated with

A) the effects of low temperature gasses or liquids flowing in hose or tubing.

B) impressions left in natural or synthetic rubber hose material.

C) flexibility characteristics of various hose materials at low ambient temperatures.

102. E04G AMG

Generally speaking, bolt grip lengths should be

A) one and one half times the thickness of the material which is fastened together.

B) equal to the thickness of the material which is fastened together, plus approximately one diameter.

C) equal to the thickness of the material which is fastened together.

103. E04G AMG

(Refer to General figure 43.) Identify the clevis bolt illustrated.

A) 1.

B) 3.

C) 2.

104. E04G AMG

A bolt with a single raised dash on the head is classified as an

A) AN corrosion resistant steel bolt.

B) NAS standard aircraft bolt.

C) NAS close tolerance bolt.

105. E04G AMG

Where is an AN clevis bolt used in an airplane?

A) For tension and shear load conditions.

B) Where external tension loads are applied.

C) Only for shear load applications.

106. E04G AMG

The aluminum code number 1100 identifies what type of aluminum?

A) Aluminum alloy containing 11 percent copper.

B) Aluminum alloy containing zinc.

C) 99 percent commercially pure aluminum.

107. E04G AMG

How is the locking feature of the fiber type locknut obtained?

A) By the use of an unthreaded fiber locking insert.

B) By a fiber insert held firmly in place at the base of the load carrying section.

C) By making the threads in the fiber insert slightly smaller than those in the load carrying section.

108. E04G AMG

Aircraft bolts are usually manufactured with a

A) class 1 fit for the threads.

B) class 2 fit for the threads.

C) class 3 fit for the threads.

109. E04G AMG

Unless otherwise specified, torque values for tightening aircraft nuts and bolts relate to

A) clean, dry threads.

B) clean, lightly oiled threads.

C) both dry and lightly oiled threads.

110. E04G AMG

(Refer to General figure 42.) Which of the bolthead code markings shown identifies an AN corrosion resistant steel bolt?

A) 1.

B) 2.

C) 3.

111. E04G AMG

The Society of Automotive Engineers (SAE) and the American Iron and Steel Institute use a numerical index system to identify the composition of various steels. In the number '4130' designating chromium molybdenum steel, the first digit indicates the

A) percentage of the basic element in the alloy.

B) percentage of carbon in the alloy in hundredths of a percent.

C) basic alloying element.

112. E04G AMG

A fiber type, self locking nut must never be used on an aircraft if the bolt is

A) under shear loading.

B) under tension loading.

C) subject to rotation.

113. E01G AMG

Liquid penetrant inspection methods may be used on which of the following?

1. porous plastics.

2. ferrous metals.

3. nonferrous metals.

4. smooth primer-sealed wood.

5. nonporous plastics.

A) 2, 3, 4.

B) 1, 2, 3.

C) 2, 3, 5.

114. E01G AMG

The testing medium that is generally used in magnetic particle inspection utilizes a ferromagnetic material that has

A) high permeability and low retentivity.

B) low permeability and high retentivity.

C) high permeability and high retentivity.

115. E01G AMG

A mechanic has completed a bonded honeycomb repair using the potted compound repair technique. What nondestructive testing method is used to determine the soundness of the repair after the repair has cured?

A) Eddy current test.

B) Metallic ring test.

C) Ultrasonic test.

116. E01G AMG

How many of these factors are considered essential knowledge for x ray exposure?

1. Processing of the film.

2. Material thickness and density.

3. Exposure distance and angle.

4. Film characteristics.

A) One.

B) Three.

C) Four.

117. E05G AMG

On a fillet weld, the penetration requirement includes what percentage(s) of the base metal thickness?

A) 100 percent.

B) 25 to 50 percent.

C) 60 to 80 percent.

118. E05G AMG

Holes and a few projecting globules are found in a weld. What action should be taken?

A) Reweld the defective portions.

B) Remove all the old weld, and reweld the joint.

C) Grind the rough surface smooth, inspect, and reweld all gaps/holes.

119. E05G AMG

(Refer to General figure 45.) What type weld is shown at A?

A) Fillet.

B) Butt.

C) Lap.

120. E05G AMG

One characteristic of a good weld is that no oxide should be formed on the base metal at a distance from the weld of more than

A) 1/2 inch.

B) 1 inch.

C) 1/4 inch.

121. E05G AMG

(Refer to General figure 44.) Select the illustration which depicts a cold weld.

A) 3.

B) 2.

C) 4.

122. E05G AMG

Why should an aircraft maintenance technician be familiar with weld nomenclature?

A) So that accurate visual (pictorial) comparisons can be made.

B) In order to gain familiarity with the welding technique, filler material, and temperature range used.

C) In order to compare welds with written (non-pictorial) description standards.

123. E03G AMG

Which of the following occurs when a mechanical force is repeatedly applied to most metals at room temperature, such as rolling, hammering, or bending?

1. The metals become artificially aged.

2. The metals become stress corrosion cracked.

3. The metals become cold worked, strain or work hardened.

A) 2.

B) 1 and 3.

C) 3.

124. E03G AMG

The reheating of a heat treated metal, such as with a welding torch

A) has little or no effect on a metal's heat treated characteristics.

B) can significantly alter a metal's properties in the reheated area.

C) has a cumulative enhancement effect on the original heat treatment.

125. E03G AMG

What is descriptive of the annealing process of steel during and after it has been annealed?

A) Rapid cooling; high strength.

B) Slow cooling; low strength.

C) Slow cooling; increased resistance to wear.

126. E03G AMG

Which material cannot be heat treated repeatedly without harmful effects?

A) Unclad aluminum alloy in sheet form.

B) 6061-T9 stainless steel.

C) Clad aluminum alloy.

127. E03G AMG

Which heat treating operation would be performed when the surface of the metal is changed chemically by introducing a high carbide or nitride content?

A) Tempering.

B) Normalizing.

C) Case hardening.

128. E02G AMG

A part which is being prepared for dye penetrant inspection should be cleaned with

A) a volatile petroleum base solvent.

B) the penetrant developer.

C) water base solvents only.

129. E02G AMG

In performing a dye penetrant inspection, the developer

A) seeps into a surface crack to indicate the presence of a defect.

B) acts as a blotter to produce a visible indication.

C) thoroughly cleans the surface prior to inspection.

130. E02G AMG

The pattern for an inclusion is a magnetic particle buildup forming

A) a fernlike pattern.

B) a single line.

C) parallel lines.

131. E02G AMG

What two types of indicating mediums are available for magnetic particle inspection?

A) Iron and ferric oxides.

B) Wet and dry process materials.

C) High retentivity and low permeability material.

132. E02G AMG

One way a part may be demagnetized after magnetic particle inspection is by

A) subjecting the part to high voltage, low amperage ac.

B) slowly moving the part out of an ac magnetic field of sufficient strength.

C) slowly moving the part into an ac magnetic field of sufficient strength.

133. E02G AMG

In magnetic particle inspection, a flaw that is perpendicular to the magnetic field flux lines generally causes

A) a large disruption in the magnetic field.

B) a minimal disruption in the magnetic field.

C) no disruption in the magnetic field.

134. E02G AMG

Circular magnetization of a part can be used to detect which defects?

A) Defects parallel to the long axis of the part.

B) Defects perpendicular to the long axis of the part.

C) Defects perpendicular to the concentric circles of magnetic force within the part.

135. E02G AMG

Under magnetic particle inspection, a part will be identified as having a fatigue crack under which condition?

A) The discontinuity pattern is straight.

B) The discontinuity is found in a nonstressed area of the part.

C) The discontinuity is found in a highly stressed area of the part.

136. E02G AMG

Which of the following methods may be suitable to use to detect cracks open to the surface in aluminum forgings and castings?

1. Dye penetrant inspection.

2. Magnetic particle inspection.

3. Metallic ring (coin tap) inspection.

4. Eddy current inspection.

5. Ultrasonic inspection.

6. Visual inspection.

A) 1, 4, 5, 6.

B) 1, 2, 4, 5, 6.

C) 1, 2, 3, 4, 5, 6.

137. E06G AMG

Which tool can be used to measure the alignment of a rotor shaft or the plane of rotation of a disk?

A) Dial indicator.

B) Shaft gauge.

C) Protractor.

138. E06G AMG

The side clearances of piston rings are measured with a

A) micrometer caliper gauge.

B) thickness gauge.

C) dial gauge.

139. E06G AMG

Which number represents the vernier scale graduation of a micrometer?

A) .00001.

B) .001.

C) .0001.

140. E06G AMG

(Refer to General figure 48.) What does the micrometer read?

A) .2974.

B) .3004.

C) .3108.

141. E06G AMG

(Refer to General figure 49.) The measurement reading on the micrometer is

A) .2758.

B) .2702.

C) .2792.

142. E06G AMG

What precision measuring tool is used for measuring crankpin and main bearing journals for out of round wear?

A) Dial gauge.

B) Micrometer caliper.

C) Depth gauge.

143. E06G AMG

How can the dimensional inspection of a bearing in a rocker arm be accomplished?

A) Depth gauge and micrometer.

B) Thickness gauge and push-fit arbor.

C) Telescopic gauge and micrometer.

144. E06G AMG

What may be used to check the stem on a poppet-type valve for stretch?

A) Dial indicator.
B) Micrometer.
C) Telescoping gauge.

145. F02G AMG
The color of 100LL fuel is
A) blue.
B) colorless or straw.
C) red.

146. F02G AMG
What must accompany fuel vaporization?
A) An absorption of heat.
B) A decrease in vapor pressure.
C) A reduction in volume.

147. F02G AMG
A fuel that vaporizes too readily may cause
A) hard starting.
B) detonation.
C) vapor lock.

148. F02G AMG
The main differences between grades 100 and 100LL fuel are
A) volatility and lead content.
B) volatility, lead content, and color.
C) lead content and color.

149. F02G AMG
Tetraethyl lead is added to aviation gasoline to
A) retard the formation of corrosives.
B) improve the gasoline's performance in the engine.
C) dissolve the moisture in the gasoline.

150. F02G AMG
How are aviation fuels, which possess greater antiknock qualities than 100 octane, classified?
A) According to the milliliters of lead.
B) By reference to normal heptane.
C) By performance numbers.

151. F01G AMG

What effect, if any, will aviation gasoline mixed with jet fuel have on a turbine engine?

A) No appreciable effect.

B) The tetraethyl lead in the gasoline forms deposits on the turbine blades.

C) The tetraethyl lead in the gasoline forms deposits on the compressor blades.

152. F01G AMG

When towing a large aircraft

A) a person should be in the cockpit to watch for obstructions.

B) persons should be stationed at the nose, each wingtip, and the empennage at all times.

C) a person should be in the cockpit to operate the brakes.

153. F01G AMG

When first starting to move an aircraft while taxiing, it is important to

A) test the brakes.

B) closely monitor the instruments.

C) notify the control tower.

154. F01G AMG

When taxiing an airplane with a quartering tailwind, the elevators and

A) upwind aileron should be held in the up position.

B) upwind aileron should be held in the down position.

C) both ailerons should be kept in the neutral position.

155. F01G AMG

A person should approach or leave a helicopter in the pilot's field of vision whenever the engine is running in order to avoid

A) the tail rotor.

B) the main rotor.

C) blowing dust or debris caused by rotor downwash.

156. F01G AMG

Which statement(s) is/are true regarding tiedown of small aircraft?

1. Manila (hemp) rope has a tendency to stretch when it gets wet.

2. Nylon or dacron rope is preferred to manila rope.

3. The aircraft should be headed downwind in order to eliminate or minimize wing lift.

4. Leave the nosewheel or tailwheel unlocked.

A) 1, 2, 3, and 4.

B) 1 and 2.

C) 2.

157. F01G AMG

Which of the following is the most satisfactory extinguishing agent for use on a carburetor or intake fire?

A) Dry chemical.

B) A fine, water mist.

C) Carbon dioxide.

158. F01G AMG

If a radial engine has been shut down for more than 30 minutes, the propeller should be rotated through at least two revolutions to

A) check for hydraulic lock.

B) check for leaks.

C) prime the engine.

159. F01G AMG

The priming of a fuel injected horizontally opposed engine is accomplished by placing the fuel control lever in the

A) IDLE CUTOFF position.

B) AUTO RICH position.

C) FULL RICH position.

160. F01G AMG

How is a flooded engine, equipped with a float type carburetor, cleared of excessive fuel?

A) Crank the engine with the starter or by hand, with the mixture control in cutoff, ignition switch off, and the throttle fully open, until the fuel charge has been cleared.

B) Turn off the fuel and the ignition. Discontinue the starting attempt until the excess fuel has cleared.

C) Crank the engine with the starter or by hand, with the mixture control in cutoff, ignition switch on, and the throttle fully open, until the excess fuel has cleared or until the engine starts.

161. F01G AMG

Generally, when an induction fire occurs during starting of a reciprocating engine, the first course of action should be to

A) discharge carbon dioxide from a fire extinguisher into the air intake of the engine.

B) continue cranking and start the engine if possible.

C) close the throttle.

162. F01G AMG

Which of the following conditions has the most potential for causing engine damage when starting or attempting to start a turbine engine?

A) Hung start.

B) Cold start.

C) Hot start.

163. G01G AMG

Which of the following are acceptable to use when utilizing chemical cleaning and/or depainting/stripping agents on aircraft?

1. Synthetic fiber wiping cloths when using a flammable agent.

2. Cotton fiber wiping cloths when using a flammable agent.

3. Atomizing spray equipment.

A) 2 and 3

B) 2.

C) 1.

164. G01G AMG

When an anodized surface coating is damaged in service, it can be partially restored by

A) applying a thin coat of zinc chromate primer.

B) chemical surface treatment.

C) use of a suitable mild cleaner.

165. G01G AMG

A primary reason why ordinary or otherwise nonapproved cleaning compounds should not be used when washing aircraft is because their use can result in

A) hydrogen embrittlement in metal structures.

B) hydrogen embrittlement in nonmetallic materials.

C) a general inability to remove compound residues.

166. G01G AMG

Fayed surfaces cause concern in chemical cleaning because of the danger of

A) forming passive oxides.

B) entrapping corrosive materials.

C) corrosion by imbedded iron oxide.

167. G02G AMG

Which of these materials is the most cathodic?

A) Zinc.

B) 2024 aluminum alloy.

C) Stainless steel.

168. G02G AMG

Why is it important not to rotate the crankshaft after the corrosion preventive mixture has been put into the cylinders on engines prepared for storage?

A) Engine damage can occur from hydraulic lock.

B) Fuel may be drawn into one or more cylinders and dilute or wash off the corrosion preventive mixture.

C) The seal of corrosion preventive mixture will be broken.

169. G02G AMG

What should be done to prevent rapid deterioration when oil or grease come in contact with a tire?

A) Wipe the tire thoroughly with a dry cloth, and then rinse with clean water.

B) Wipe the tire with a dry cloth followed by a washdown and rinse with soap and water.

C) Wipe the tire with a cloth dampened with aromatic naphtha and then wipe dry with a clean cloth.

170. G02G AMG

A primary cause of intergranular corrosion is

A) improper heat treatment.

B) dissimilar metal contact.

C) improper application of primer.

171. G02G AMG

One way of obtaining increased resistance to stress corrosion cracking is by

A) relieving compressive stresses (via heat treatment) on the metal surface.

B) creating compressive stresses (via shot peening) on the metal surface.

C) producing nonuniform deformation while cold working during the manufacturing process.

172. G02G AMG

Spilled mercury on aluminum

A) greatly increases susceptibility to hydrogen embrittlement.

B) may cause impaired corrosion resistance if left in prolonged contact.

C) causes rapid and severe corrosion that is very difficult to control.

173. G02G AMG

What may be used to remove corrosion from highly stressed steel surfaces?

A) Steel wire brushes.

B) Fine grit aluminum oxide.

C) Medium grit carborundum paper.

174. G02G AMG

Fretting corrosion is most likely to occur

A) when two surfaces fit tightly together but can move relative to one another.

B) only when two dissimilar metals are in contact.

C) when two surfaces fit loosely together and can move relative to one another.

175. G02G AMG

Which of the listed conditions is NOT one of the requirements for corrosion to occur?

A) The presence of an electrolyte.

B) Electrical contact between an anodic area and a cathodic area.

C) The presence of a passive oxide film.

176. G02G AMG

A nonelectrolytic chemical treatment for aluminum alloys to increase corrosion resistance and paint bonding qualities is called

A) anodizing.

B) alodizing.

C) dichromating.

177. G02G AMG

Which of the following may not be detectable even by careful visual inspection of the surface of aluminum alloy parts or structures?

A) Filiform corrosion.

B) Intergranular corrosion.

C) Uniform etch corrosion.

178. H02G AMG

A rectangular shaped fuel tank measures 27-1/2 inches in length, 3/4 foot in width, and 8-1/4 inches in depth. How many gallons will the tank contain?

(231 cu. in. = 1 gal.)

A) 7.366

B) 8.83

C) 170.156

179. H02G AMG

(Refer to General figure 56.) Compute the area of the trapezoid.

A) 24 square feet.

B) 48 square feet.

C) 10 square feet.

180. H02G AMG

What is the piston displacement of a master cylinder with a 1.5-inch diameter bore and a piston stroke of 4 inches?

A) 9.4247 cubic inches.

B) 7.0686 cubic inches.

C) 6.1541 cubic inches.

181. H02G AMG

A four cylinder aircraft engine has a cylinder bore of 3.78 inches and is 8.5 inches deep. With the piston on bottom center, the top of the piston measures 4.0 inches from the bottom of the cylinder. What is the approximate piston displacement of this engine?

A) 200 cubic inches.

B) 360 cubic inches.

C) 235 cubic inches.

182. H02G AMG

What force is exerted on the piston in a hydraulic cylinder if the area of the piston is 1.2 square inches and the fluid pressure is 850 PSI?

A) 1,020 pounds.

B) 960 pounds.

C) 850 pounds.

183. H02G AMG

What size sheet of metal is required to fabricate a cylinder 20 inches long and 8 inches in diameter?

(Note: C = pi x D)

A) 20 inches x 25-5/32 inches.

B) 20 inches x 24-9/64 inches.

C) 20 inches x 25-9/64 inches.

184. H02G AMG

(Refer to the figure 71.) What is the volume of a sphere with a radius of 4.5 inches?

A) 47.71 cubic inches

B) 381.7 square inches

C) 381.7 cubic inches

185. H01G AMG

Find the square root of 124.9924.

A) 111.8 x 10 to the third power.

B) .1118 x 10 to the negative second power.

C) 1,118 x 10 to the negative second power.

186. H01G AMG

Which of the figures is using scientific notation?

A) 1.

B) 2.

C) both 1 and 2.

187. H01G AMG

(Refer to the figure 69.) Solve the equation.

A) 12.

B) 60.

C) 76.

188. H01G AMG

(Refer to the figure 70.) Which alternative answer is equal to 5.59?

A) 1.

B) 2.

C) 3.

189. H04G AMG

(Refer to General figure 60.) Solve the equation.

A) 11.9

B) 11.7

C) 11.09

190. H04G AMG

(Refer to General figure 59.) Solve the equation.

A) +31.25

B) -5.20

C) -31.25

191. H03G AMG

If the volume of a cylinder with the piston at bottom center is 84 cubic inches and the piston displacement is 70 cubic inches, then the compression ratio is

A) 7:1

B) 1.2:1

C) 6:1

192. H03G AMG

An airplane flying a distance of 750 miles used 60 gallons of gasoline. How many gallons will it need to travel 2,500 miles?

A) 200.

B) 31,250.

C) 9,375.

193. H03G AMG

How much current does a 30-volt 1/2-horsepower motor that is 85-percent efficient draw from the bus?

(Note: 1 horsepower = 746 watts)

A) 14.6 amperes.

B) 12.4 amperes.

C) 14.3 amperes.

194. H03G AMG

Maximum life for a certain part is 1100 hours. Recently, 15 of these parts were removed from different aircraft with an average life of 835.3 hours. What percent of the maximum part life has been achieved?

A) 75.9 percent.

B) 76.9 percent.

C) 75.0 percent.

195. I02G AMG

What is/are the appropriate action(s) concerning minor repairs performed on a certificated aircraft?

1. FAA Form 337's must be completed.

2. Entries must be made in the aircraft's maintenance record.

3. The owner of the aircraft must submit a record of all minor repairs to the FAA at least annually.

A) 1 and 2.

B) 2.

C) 2 and 3.

196. I02G AMG

An FAA Form 337 is used to record and document

A) preventive and unscheduled maintenance, and special inspections.

B) major and minor repairs, and major and minor alterations.

C) major repairs and major alterations.

197. I02G AMG

When approving for return to service after maintenance or alteration, the approving person must enter in the maintenance record of the aircraft

A) the date the maintenance or alteration was begun, a description (or reference to acceptable data) of work performed, the name of the person performing the work (if someone else), signature, and certificate number.

B) a description (or reference to acceptable data) of work performed, date of completion, the name of the person performing the work (if someone else), signature, and certificate number.

C) a description (or reference to acceptable data) of work performed, date of completion, the name of the person performing the work (if someone else), signature, certificate number, and kind of certificate held.

198. I02G AMG

An aircraft owner was provided a list of discrepancies on an aircraft that was not approved for return to service after an annual inspection. Which of the following statements is/are true concerning who may correct the discrepancies?

1. Only a mechanic with an inspection authorization.

2. An appropriately rated mechanic.

3. Any certificated repair station.

A) 1.

B) 2 .

C) 2 & 3.

199. I02G AMG

For aircraft operated under part 91, which of the following records must be retained for at least one year, or until the work is repeated or superseded ?

A) Records of time since overhaul of items requiring overhaul on a time specified basis.

B) Records of maintenance, alterations, preventive maintenance, 100-hour, annual, and progressive inspections.

C) Records of the current inspection status of the aircraft, including time since last required inspection.

200. I02G AMG

A certificated mechanic without an inspection authorization who signs the appropriate block on FAA Form 337 is doing what?

A) Certifying that the work was done in accordance with the requirements of 14 CFR part 43.

B) Approving the work for return to service.

C) Certifying the maintenance information used as FAA-approved data.

201. I02G AMG

In order to reconstruct lost or destroyed aircraft maintenance records, what is it necessary to establish?

A) Dates of all maintenance, preventive maintenance, and alterations.

B) Dates and/or times of all 100-hour, annual, or progressive inspections.

C) Total time-in-service of the airframe.

202. I02G AMG

What is the status of data used as a basis for approving major repairs or alterations for return to service?

A) Data must be least FAA-acceptable when it is used for that purpose.

B) Data must be FAA-approved prior to its use for that purpose.

C) Data may be FAA-approved after its use for that purpose.

203. I01G AMG

Which is an appliance major repair?

A) Overhaul of a hydraulic pressure pump.

B) Repairs to a propeller governor or its control.

C) Troubleshooting and repairing broken circuits in landing light circuits.

204. I01G AMG

If work performed on an aircraft has been done satisfactorily, the signature of an authorized person on the maintenance records for maintenance or alterations performed constitutes

A) approval of the aircraft for return to service.

B) approval for return to service only for the work performed.

C) verification that the maintenance or alterations were performed referencing approved maintenance data.

205. I01G AMG

Where is the record of compliance with Airworthiness Directives or manufacturers' service bulletins normally indicated?

A) FAA Form 337.

B) Aircraft maintenance records.

C) Flight manual.

206. I01G AMG

Where should you find this entry?

'Removed right wing from aircraft and removed skin from outer 6 feet. Repaired buckled spar 49 inches from tip in accordance with figure 8 in the manufacturer's structural repair manual No. 28-1.'

A) Aircraft engine maintenance record.

B) Aircraft minor repair and alteration record.

C) FAA Form 337.

207. I01G AMG

Which maintenance record entry best describes the action taken for a .125-inch deep dent in a straight section of 1/2-inch aluminum alloy tubing?

A) Dent within acceptable limits, repair not necessary.

B) Dented section removed and replaced with identical new tubing flared to 45°.

C) Dented section removed and replaced with identical new tubing flared to 37°.

208. I01G AMG

Which statement is true regarding the requirements for maintenance record format?

A) Any format that provides record continuity and includes the required information may be used.

B) The format provided by the manufacturer of the aircraft must be retained.

C) Any desired change from manufacturer provided format requires approval from the Federal Aviation Administration

209. I01G AMG

For aircraft operated under part 91, when is aircraft total time required to be recorded in aircraft maintenance records?

A) After satisfactorily completing maintenance, preventive maintenance, rebuilding, and alteration (except inspections).

B) After satisfactorily completing inspections.

C) After satisfactorily completing maintenance, preventive maintenance, rebuilding, and alteration (including inspections).

210. J01G AMG

If the temperature of a confined liquid is held constant and its pressure is tripled, the volume will

A) triple.

B) be reduced to one third its original volume.

C) remain the same.

211. J01G AMG

The speed of sound in the atmosphere is most affected by variations in which of the following?

1. Sound frequency (cps).

2. Ambient temperature.

3. Barometric pressure.

A) 1.

B) 2.

C) 3.

212. J01G AMG

Which will weigh the least?

A) 98 parts of dry air and 2 parts of water vapor.

B) 35 parts of dry air and 65 parts of water vapor.

C) 50 parts of dry air and 50 parts of water vapor.

213. J01G AMG

Under which conditions will the rate of flow of a liquid through a metering orifice (or jet) be the greatest (all other factors being equal)?

A) Unmetered pressure, 18 PSI; metered pressure, 17.5 PSI; atmospheric pressure, 14.5 PSI.

B) Unmetered pressure, 23 PSI; metered pressure, 12 PSI; atmospheric pressure, 14.3 PSI.

C) Unmetered pressure, 17 PSI; metered pressure, 5 PSI; atmospheric pressure, 14.7 PSI.

214. J01G AMG

The boiling point of a given liquid varies

A) directly with pressure.

B) inversely with pressure.

C) directly with density.

215. J01G AMG

How much work input is required to lower (not drop) a 120-pound weight from the top of a 3-foot table to the floor?

A) 120 pounds of force.

B) 360 foot-pounds.

C) 40 foot-pounds.

216. J01G AMG

An airplane wing is designed to produce lift resulting from

A) positive air pressure below and above the wing's surface along with the downward deflection of air.

B) negative air pressure below the wing's surface and positive air pressure above the wing's surface along with the downward deflection of air.

C) positive air pressure below the wing's surface and negative air pressure above the wing's surface along with the downward deflection of air.

217. J01G AMG

A wing with a very high aspect ratio (in comparison with a low aspect ratio wing) will have

A) increased drag at high angles of attack.

B) a low stall speed.

C) poor control qualities at low airspeeds.

218. J01G AMG

The purpose of aircraft wing dihedral is to

A) increase lateral stability.

B) increase longitudinal stability.

C) increase lift coefficient of the wing.

219. J01G AMG

If all, or a significant part of a stall strip is missing on an airplane wing, a likely result will be

A) decreased lift in the area of installation at high angles of attack.

B) asymmetrical lateral control at low angles of attack.

C) asymmetrical lateral control at or near stall angles of attack.

220. J01G AMG

Which statement concerning heat and/or temperature is true?

A) There is an inverse relationship between temperature and heat.

B) Temperature is a measure of the kinetic energy of the molecules of any substance.

C) Temperature is a measure of the potential energy of the molecules of any substance.

221. J01G AMG

In physics, which of the following factors are necessary to determine power?

1. Force exerted.

2. Distance moved.

3. Time required.

A) 1 and 2.

B) 2 and 3.

C) 1, 2, and 3.

222. J01G AMG

Aspect ratio of a wing is defined as the ratio of the

A) wingspan to the wing root.

B) square of the chord to the wingspan.

C) wingspan to the mean chord.

223. K01G AMG

(Refer to General figure 62.) The -100 in the title block (Area 1) is applicable to which doubler part number(s)?

A) -101.

B) -102.

C) Both.

224. K01G AMG

What is the maintenance recording responsibility of the person who complies with an

Airworthiness Directive?

A) Advise the aircraft owner/operator of the work performed.

B) Make an entry in the maintenance record of that equipment.

C) Advise the FAA district office of the work performed, by submitting an FAA Form 337.

225. K01G AMG

The Air Transport Association of America (ATA) Specification No. 100

(1) establishes a standard for the presentation of technical data in maintenance manuals.

(2) divides the aircraft into numbered systems and subsystems in order to simplify locating maintenance instructions.

Regarding the above statements,

A) both No. 1 and No. 2 are true.

B) neither No. 1 nor No. 2 is true.

C) only No. 1 is true.

226. K01G AMG

(1) Propellers are NOT included in the Airworthiness Directive system.

(2) A certificated powerplant mechanic may make a minor repair on an aluminum propeller and approve for return to service.

Regarding the above statements,

A) only No. 2 is true.

B) both No. 1 and No. 2 are true.

C) neither No. 1 nor No. 2 is true.

227. K01G AMG

(Refer to General figure 62, 62A, & 62B as necessary.) Which doubler(s) require(s) heat treatment before installation?

A) -101.

B) -102.

C) Both.

228. K01G AMG

(1) The Federal Aviation Regulations require approval after compliance with the data of a Supplemental Type Certificate.

(2) An installation of an item manufactured in accordance with the Technical Standard Order system requires no further approval for installation in a particular aircraft.

A) only No. 2 is true.

B) neither No. 1 nor No. 2 is true.

C) only No. 1 is true.

229. K01G AMG

Specifications pertaining to an aircraft model manufactured under a type certificate, of which less than 50 are shown on the FAA Aircraft Registry, can be found in the

A) Aircraft Listing.

B) Summary of Discontinued Aircraft Specifications.

C) FAA Statistical Handbook of Civil Aircraft Specifications.

230. K01G AMG

The issuance of an Airworthiness Certificate is governed by

A) 14 CFR Part 23.

B) 14 CFR Part 21.

C) 14 CFR Part 39.

231. K01G AMG

When an airworthy (at the time of sale) aircraft is sold, the Airworthiness Certificate

A) becomes invalid until the aircraft is reinspected and approved for return to service.

B) is voided and a new certificate is issued upon application by the new owner.

C) is transferred with the aircraft.

232. K01G AMG

Placards required on an aircraft are specified in

A) AC 43.13-1B.

B) the Federal Aviation Regulations under which the aircraft was type certificated.

C) Aircraft Specifications or Type Certificate Data Sheets.

233. K01G AMG

Suitability for use of a specific propeller with a particular engine airplane combination can be determined by reference to what informational source?

A) Propeller Specifications or Propeller Type Certificate Data Sheet.

B) Aircraft Specifications or Aircraft Type Certificate Data Sheet.

C) Alphabetical Index of Current Propeller Type Certificate Data Sheets, Specifications, and Listings.

234. K01G AMG

Where are technical descriptions of certificated propellers found?

A) Applicable Airworthiness Directives.

B) Aircraft Specifications.

C) Propeller Type Certificate Data Sheets.

235. K01G AMG

(Refer to General figure 62, 62A, & 62B as necessary.) How many parts will need to be fabricated by the mechanic in the construction and installation of one doubler?

A) 2.

B) 3.

C) 4.

236. K01G AMG

The action required by an AD may take what form?

1. Inspection.

2. Part(s) replacement.

3. Design modification.

4. Change in operating procedure(s).

5. Overall change in the content, form and disposition of aircraft maintenance records.

A) 1, 2, 3, and/or 4.

B) 1, 2, 3, and/or 5.

C) 1, 2, 3, 4, and/or 5.

237. K01G AMG

Type Certificate Data Sheets are issued for which of the following products?

A) Aircraft, engines, and propellers.

B) Aircraft, engines, and appliances.

C) Aircraft, engines, propellers, and appliances.

238. K01G AMG

How long are AD compliance records required to be kept?

A) Until the work is repeated or superseded by other work.

B) For one year after the work is performed, or until the work is repeated or superseded by other work.

C) They shall be retained, and then transferred with the aircraft when it is sold.

239. K01G AMG

Which of the following includes all the regulatory definitions of "maintenance"?

A) Overhaul, repair, parts replacement, and preservation, and preventive maintenance.

B) Overhaul, repair, parts replacement, preservation, inspection, and preventive maintenance.

C) Overhaul, repair, parts replacement, inspection, and preservation.

240. K01G AMG

What is the maximum penalty for cheating or other unauthorized conduct when taking an FAA mechanic test?

A) Ineligibility to receive any certificate or rating for one year.

B) Ineligibility to receive any certificate or rating for one year, and suspension or revocation of any certificate held.

C) Ineligibility to receive any certificate or rating for one year, and suspension of any certificate held.

241. K02G AMG

The following is a table of airspeed limits as given in an FAA issued aircraft specification:

| | |
|---|---|
| Normal operating speed | 260 knots |
| Never exceed speed | 293 knots |
| Maximum landing gear operation speed | 174 knots |
| Maximum flap extended speed | 139 knots |

The high end of the white arc on the airspeed instrument would be at

A) 260 knots.

B) 293 knots.

C) 139 knots.

242. L01G AMG

Who has the authority to approve for return to service a propeller after a 100-hour inspection?

1. A mechanic with a powerplant rating.

2. Any certificated repairman.

3. A non-certificated mechanic working under the supervision of a certificated mechanic with airframe and powerplant ratings.

A) 1.

B) 1 and 3.

C) 2.

243. L01G AMG

Who is responsible for determining that materials used in aircraft maintenance and repair are of the proper type and conform to the appropriate standards?

A) The installing person or agency.

B) The owner or operator of the aircraft.

C) The manufacturer of the aircraft.

244. L01G AMG

A certificated mechanic shall not exercise the privileges of the certificate and rating unless, within the preceding 24 months, the Administrator has found that the certificate holder is able to do the work or the certificate holder has

A) served as a mechanic under the certificate and rating for at least 18 months.

B) served as a mechanic under the certificate and rating for at least 12 months.

C) served as a mechanic under the certificate and rating for at least 6 months.

245. L01G AMG

The replacement of a damaged engine mount with a new identical engine mount purchased from the aircraft manufacturer is considered a

A) major or minor repair, depending upon the complexity of the installation.

B) major repair.

C) minor repair.

246. L01G AMG

Certificated mechanics, under their general certificate privileges, may

A) perform minor repairs to instruments.

B) perform 100-hour inspection of instruments.

C) perform minor alterations to instruments.

247. L01G AMG

Which is classified as a major repair?

A) The splicing of skin sheets.

B) Installation of new engine mounts obtained from the aircraft manufacturer.

C) Any repair of damaged stressed metal skin.

248. L01G AMG

Certificated mechanics with a powerplant rating may perform

A) any inspection required by the Federal Aviation Regulations on a powerplant or propeller or any component thereof, and may release the same to service.

B) 100-hour and/or annual inspections required by the Federal Aviation Regulations on powerplants, propellers, or any components thereof, and may release the same to service.

C) 100-hour inspections required by the Federal Aviation Regulations on powerplants, propellers, or any components thereof, and may release the same to service.

249. L01G AMG

FAA certificated mechanics may

A) approve for return to service a major repair for which they are rated.

B) supervise and approve a 100-hour inspection.

C) approve for return to service a minor alteration they have performed appropriate to the rating(s) they hold.

250. L01G AMG

How long does the holder of a certificate issued under 14 CFR part 65 have to notify the FAA after any change in permanent mailing address?

A) 30 days.

B) 60 days.

C) 90 days.

251. L01G AMG

What is the maximum duration of a temporary airman certificate?

A) 60 days.

B) 90 days.

C) 120 days.

252. L01G AMG

Which of the following statements is true for a certificated and appropriately rated mechanic regarding repairs and alterations?

A) He/she may perform an airframe major repair or major alteration, but cannot approve the work for return to service.

B) He/she may perform airframe minor repairs and minor alterations and approve the work for return to service, but cannot perform an airframe major repair or major alteration.

C) He/she may perform an airframe major repair or major alteration and approve the work, but not the entire aircraft, for return to service.